LoomLogic: Transforming Textile Recycling

Overview

- **Objective:** Reshape the textile recycling industry by automating the sorting process, making it more efficient, scalable, and cost-effective.
- **Current Challenge:** Manual sorting is labor-intensive, costly, and inefficient, leading to high operational costs and limited scalability.

Key Innovations

- **Automated Textile Sorting:** Uses hardware and software to automatically sort textiles by type, condition, and value.
- **Omnidirectional Rollers:** Independently controlled rollers, similar to those used in airports (TSA), flatten and prepare textiles for sorting, adapting to different shapes and materials.
- **Integrated Computer Vision:** Identifies clothing types with over 85% accuracy, reducing the need for manual intervention.

Impact

- **Cost Reduction:** Expected to reduce sorting costs by up to 45%, making textile recycling more economically viable.
- **Increased Throughput:** Ability to handle larger volumes efficiently, addressing the growing waste issue from fast fashion.
- **Environmental Sustainability:** Reduces textile waste in landfills, lowers greenhouse gas emissions, and supports a circular economy.